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ABSTRACT

A survey of 652 adventure recreation agencies in higher education settings examined the use of risk management practices and the relationships between agency characteristics and risk management techniques. The survey contained 27 Likert Scale questions divided into four categories (agency guidance, staff development, participant education, and written documentation); 11 check lists about agency policies and procedures; and 9 questions on demographics (agency characteristics, environment, and staffing). Results show that over 84 percent of the agencies had risk management policies, but only 66.9 percent had ways of distributing the policies to staff, and only about 66 percent had their policies approved by the institution that would have to defend the agency in court. Over 73 percent of the agencies had risk management procedures, but only 65 percent had ways of distributing them to staff. Agencies that used incident/accident reports outnumbered those that used medical history forms by 17.9 percentage points. Agencies that systematically included risk management into conducting an activity outnumbered those that similarly included risk management into evaluating an activity by 10.3 percentage points. Agency housing, institutional enrollment, number of full-time employees, number of part-time employees, and geographic region had no effect on any of the categories. The type of institution had some effect on development of agency staff and a definite effect on participant education, and institutional funding had some effect on the use of written documentation. Survey results are shown by data tables and graphs. (TD)

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RISK MANAGEMENT PRACTICES OF UNIVERSITY BASED ADVENTURE PROGRAMS

By

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ABSTRACT

The subject of risk management in adventure recreation activities is largely governed by opinions. Although research has been done to determine which opinions appear to hold up in court, no research had been done to find out what agencies are currently doing to manage risk. This paper provides insight into how agencies have incorporated risk management techniques into their programming. The paper also shows the effect agency demographics have on the techniques that are used. Finally, a number of questions are asked concerning inconsistencies that are exposed when data is compared.

INTRODUCTION

McAvoy, Dustin, Rankin, and Frankt (1985) paraphrased Roderick Nash by saying, "wilderness is the uncontrolled, the uncontrolled is unpredictable and therefore dangerous" (p. 42). For many years this perception governed legal decisions concerning accidents that happened in the wilderness. Court decisions reflected the attitude that people venturing into the wilderness took their lives in their own hands (Moss, 1992).

During the past decade however, courts' perceptions of wilderness and related adventure activities changed. This reflected the public's change in perception. The public's increased exposure to adventure recreation made activities, once considered extra ordinary, commonplace with no perceived risk. This challenged agencies providing adventure recreation to balance the public's demand for adventure recreation with their lack of understanding about the associated risks. This balance has come to be known as risk management.

When this concept originated in the insurance industry, the goal was to prepare for the unexpected and if something did happen, hold the negative financial impact to a minimum. Today, in the field of recreation, this concept is more participant oriented. McGregor and MacDonald (1989) said the primary goal of risk management is to protect the participant from injuries and the secondary goal is to reduce the possibility of lawsuits should an injury occur.

The importance of risk management to the field of adventure recreation is evident in its top organizations and associations. Organizations such as Outward Bound and the National Outdoor Leadership School created positions within their administrative structures to oversee safety and risk management concerns (Gookin, 1995). Likewise, the Association of Experiential Education instituted an agency accreditation process (Gass & Williamson, 1995). Finally, in 1992 professionals from across the country organized the Wilderness Risk Managers Committee in order "to share resources and establish a communication network" (Gookin, 1995, back cover). This committee now sponsors an annual conference.

During the past two decades many adventure professionals have seen the necessity of risk management and have tried to share this with others in the profession. Voluminous amounts of information about the subject have been distributed throughout the profession via journal articles and books. However, explanations of some risk management practices vary from author to author. Thus, understanding different recommendations and implementing all of this information can be a large task for an agency administrator and staff. In addition to the author's varying explanations, each agency administrator will add interpretation to what the authors have recommended. Because of this interpretation, Ewert (1984) stated that the subject of risk management is "questionable and worthy of investigation" (p.27). Ford and Blanchard (1993) also expressed concern when they said that because of the complexity of this issue, administrators may decide not to offer an activity, or worse, they may offer it without completing the risk management recommendations.

RC 021512

In an attempt to provide additional information to this growing area of interest, the focus of this research project was to determine the risk management practices of adventure recreation agencies in the setting of higher education. Professional literature has discussed the importance of risk management practices and provided information to help implement these practices. However, what is written in journals and books may or may not be taking place in actual agency practices.

PURPOSE AND PARAMETERS OF THE STUDY

This paper was not intended to be a how-to guide for managing risks in an adventure program. In this author's opinion, the field is well saturated with this information. The purpose of this paper was to provide a snapshot of the actual risk management plans currently used by university or college based adventure recreation agencies, and identify possible relationships between agency demographics and risk management techniques.

The information in this paper was gathered from the immediate administrators of adventure recreation agencies based in colleges and universities in the United States. Further, these agencies provided leadership, coordination, or structure to adventure activities. The author chose to use the "leadership, coordination, or structure" criteria because it described the agency's involvement in the activity and was open to very little misinterpretation. Although this study may be helpful to agencies that lie outside of these parameters, its data does not represent these agencies.

METHOD OF CONDUCTING THE STUDY

In reviewing the literature concerning risk management, it was discovered that there has been little research done. So, in many instances the author was breaking new ground including the development of the survey instrument and statistical analysis.

The names and addresses of the immediate administrators where gathered from the first addition of the Outdoor Recreation Resource Directory & Data/Resource Guide (Webb, 1991) and the 1997 Recreational Sports Directory (National Intramural-Recreational Sports Association, 1997). Between these two sources, a list of 652 agencies that claimed ownership of an adventure program was generated. The entire population was surveyed so that differences amongst programs of different, location, size, and administration could be detected.

As stated earlier, the author developed the survey. Numerous resources were used starting with a review of literature to determine the survey questions. The format of the questionnaire was modeled after Janosik and Anderson's (1989) "Alcohol Risk Management Survey." Finally, once the survey was completed, it was reviewed by the author's thesis committee at Southern Illinois University and a panel of experts from the field of risk management in adventure programming. This panel checked the survey content for clear and unambiguous terminology, usefulness of information, and overall reaction to the tool. Suggestions and critiques were used to refine the survey so that the population easily and appropriately interpreted it. When finalized, the survey contained 27 Likert Scale questions and 11 check lists that gathered information concerning agency policy and procedure. There were also nine questions that gathered demographic information.

The analysis of the data began by reporting the percentage scores for the Likert Scale questions, checklists, and demographic information. For the second phase of analysis, the Likert Scale questions were divided into four categories: Agency Guidance, Staff Development, Participant Education, and Written Documentation. These categories were considered the dependent variables while the demographic data were considered the independent variables. A MANOVA test was initially used in this analysis to objectively identify significant differences in the dependent variables when the comparisons were done amongst the responses to each independent variable. Once it was determined that there was no category interrelationship, ANOVA tests were used with the level of significance set at .05. In short, the analysis was looking for the effect that demographic information had on agencies' preferences in using the categories.

THE RESULTS

The results of the survey are detailed in this section. In the original survey, the questions were categorized according to whether the question dealt with policies or procedures. Here the questions are presented according to the categories mentioned above. This will allow for an easier explanation of the

reasons for grouping the questions and the effects of the demographic information. **The numbers at the end of the bar graphs represent percentages.**

PROGRAM DEMOPGRAPHICS

This section will illustrate the general makeup of the population that responded to the survey.

1. Institution funding:

Public	72.1%
Private	21.3%
No Response	6.6%

2. Our agency is housed within a(n):

Campus Recreation Services	45.6%
Student Union/Center	32.3%
Academic Department	13.2%
Other	5.9%
No Response	4.4%

3. Enrollment of our university/college:

Less than 10,000	51.5%
10,001 to 20,000	24.3%
20,001 to 30,000	11.8%
More than 30,001	8.8%
No Response	3.7%

4. Number of full time employees working in our adventure recreation agency:

Zero	19.9%
One	40.4%
Two	24.3%
Three or more	11.8%
No Response	3.7%

5. Number of part time employees working in our adventure recreation agency:

Zero to Five	43.4%
Six to 10	14.0%
11 to 15	11.8%
16 or more	26.5%
No Response	4.4%

6. Type of institution:

Community college	3.7%
College or university	91.9%
No Response	4.4%

7. Annual number of agency-participant contact days in the field: **Too Many Responses to Report!**

8. Region in which your institution is located:

Northeast	10.3%
Middle Atlantic	16.9%
Southeast	10.3%
Great Lakes	13.2%
South Central	8.1%
Northern Plain	5.1%
Rocky Mountains	16.2%
Pacific	14.0%
Missing	5.8%

The regions were broken down as follows:

Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont

Middle Atlantic: Delaware, District of Columbia, Maryland, New Jersey, North Carolina, Pennsylvania, South Carolina, Virginia, and West Virginia

Southeast: Alabama, Florida, Georgia, Kentucky, Mississippi, and Tennessee

Great Lakes: Illinois, Indiana, Michigan, Ohio, and Wisconsin

South Central: Arkansas, Kansas, Louisiana, Missouri, Oklahoma, and Texas

Northern Plains: Iowa, Minnesota, Nebraska, North Dakota, and South Dakota
Rocky Mountains: Arizona, Colorado, Idaho, Montana, New Mexico, Utah, and Wyoming
Pacific: Alaska, California, Hawaii, Nevada, Oregon, and Washington

INITIAL QUESTION

The initial question of the survey was answered by all of the respondents. By responding yes, they met the criteria for the survey and were asked to complete the survey. If they responded no because they didn't meet the criteria, they were asked to return the survey with only the initial question answered.

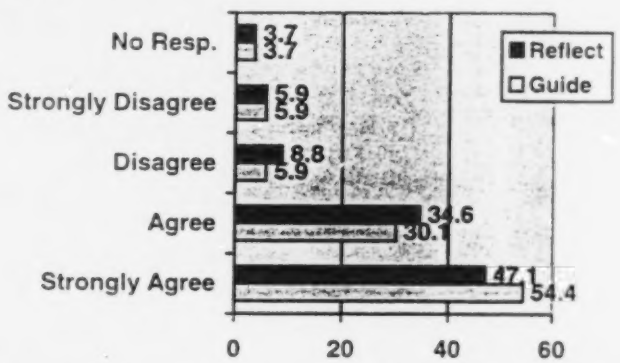
1. Does your agency provide leadership, coordination, or structure to adventure recreation activities?

Yes	63.6%
No	36.4%

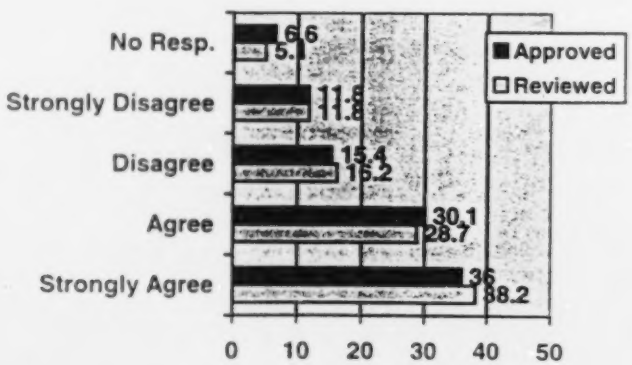
AGENCY GUIDANCE CATEGORY

The questions for this category were grouped together because they refer to the operation of the agency at the organizational level. Some questions are combined with others on the same graph to emphasize a comparison.

1. Our agency has risk management policies that help to guide its operation.
2. Our agency has risk management policies that reflect our agency's mission statement.



3. Our agency has risk management policies that have been *reviewed* by our institution's risk management department or legal council.
4. Our agency has risk management policies that have been *approved* by our institution's risk management department or legal council.



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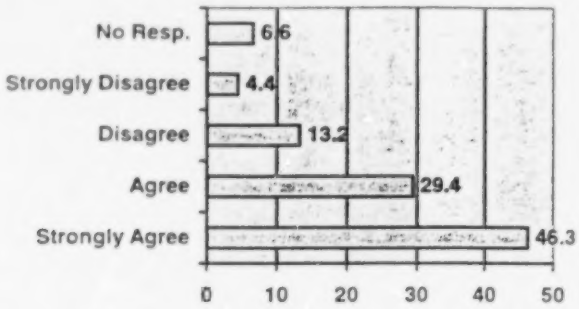
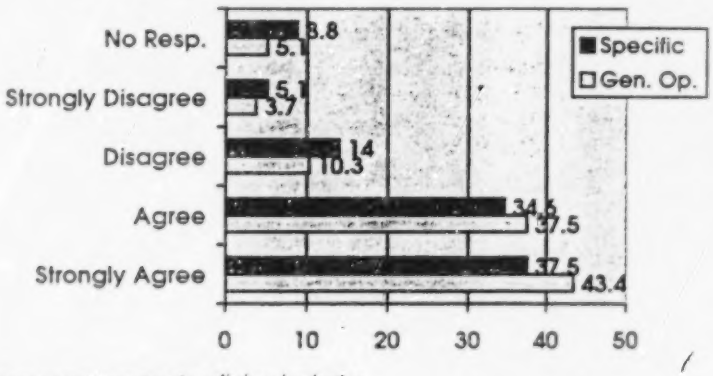
5. Our agency has risk management polices that have been updated since their development.



6. Our agency has risk management polices for its general operation.
7. Our agency has specific risk management policies for leading an activity or event.



Checklist for question 6 - These management policies include:

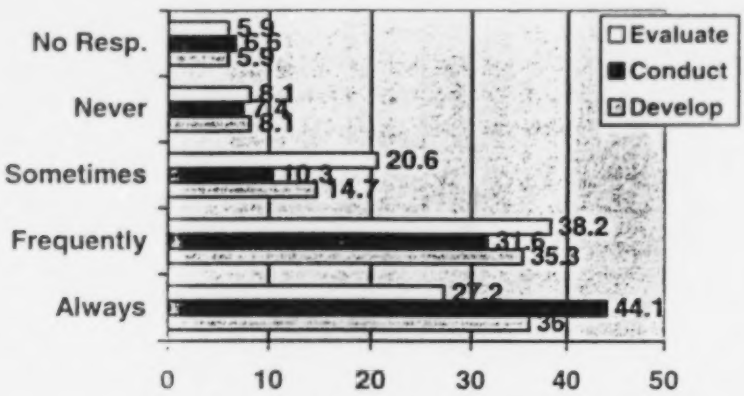
Personnel qualifications	Yes	80.1%	No	14.7%	No Resp.	5.1%
Participant requirements	Yes	72.8%	No	20.6%	No Resp.	6.6%
Emergency action plan	Yes	77.9%	No	18.4%	No Resp.	3.7%
Organizational structure	Yes	71.3%	No	22.8%	No Resp.	5.9%
Employee-participant interaction	Yes	65.4%	No	26.5%	No Resp.	8.1%
Activity specific operating procedure	Yes	74.3%	No	21.3%	No Resp.	4.4%
Program evaluation	Yes	71.3%	No	22.8%	No Resp.	4.4%
Employee evaluation	Yes	69.9%	No	23.5%	No Resp.	6.6%
Program design	Yes	66.9%	No	25%	No Resp.	8.1%
Vehicle usage	Yes	78.7%	No	16.9%	No Resp.	4.4%
Program equipment use by staff	Yes	71.3	No	22.1%	No Resp.	6.6%

Checklist for question 7 - These policies for leading an activity or event include:

Specific employee requirements	Yes	75.7%	No	18.4%	No Resp.	5.9%
Specific participant requirements	Yes	63.2%	No	30.9%	No Resp.	5.9%
Operating procedures for activity	Yes	71.3%	No	22.1%	No Resp.	6.6%
Equipment requirements	Yes	72.8%	No	20.6%	No Resp.	6.6%
Site selection	Yes	64.7%	No	25.7%	No Resp.	9.6%

8. Our agency uses a systematic process to include risk management procedures when *developing* an activity or event.
9. Our agency uses a systematic process to include risk management procedures when *conducting* an activity or event.

10. Our agency uses a systematic process to include risk management procedures when *evaluating* an activity or event.



When an analysis of the data was done to test for the effects of demographics on this category, the following was found.

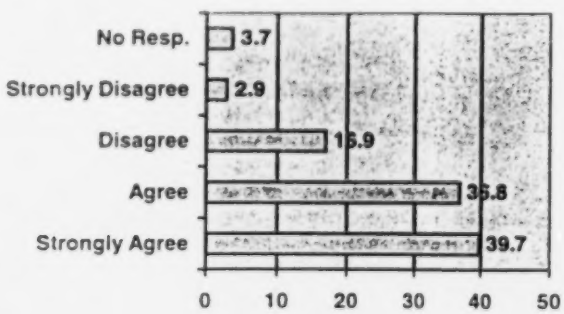
Institutional funding	None
Agency housing	None
Enrollment	None
Full time employees	None
Part time employees	None
Type of institution	None
Contact days	Yes, at .002 level of significance*
Geographic region	None

*A question has been raised with the type of test that was used in this instance. There may or may not be an actual effect here.

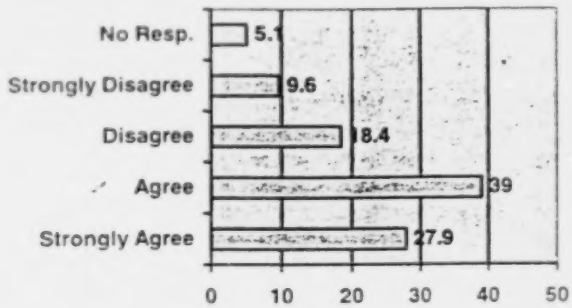
STAFF DEVELOPMENT

The questions for this category were grouped together because they refer to the development of employees that operate the adventure activities. Some questions are combined with others on the same graph to emphasize a comparison.

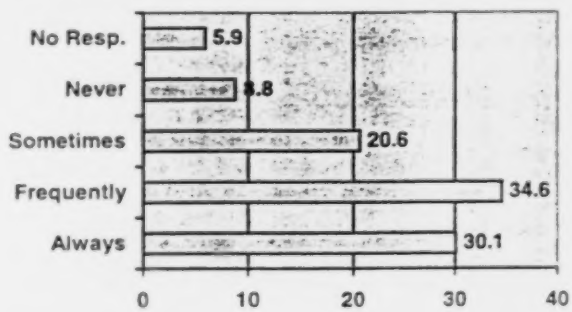
1. Our agency has risk management policies that define the agency's standard or care owed to the participants.



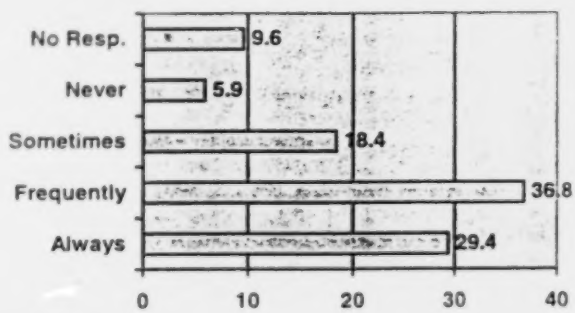
2. Our agency has risk management *policies* that are systematically distributed to agency staff.



3. Our risk management *procedures* are systematically distributed to agency staff.



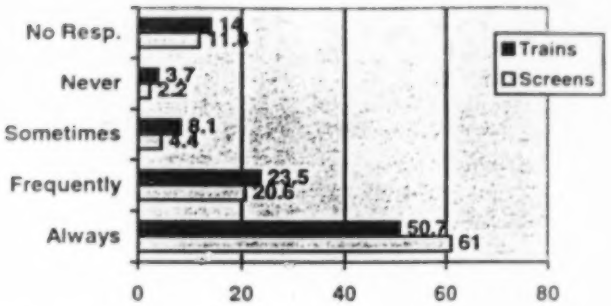
4. Our agency debriefs the staff after each activity.



Checklist for question 4 – A debrief includes:

Discussion of incident reports	Yes	71.3%	No	16.9%	No Resp.	11.8%
Evaluation of activity site	Yes	75%	No	14.7%	No Resp.	10.3%
Evaluation of equipment	Yes	75%	No	14.7%	No Resp.	10.3%
Self & peer evaluation	Yes	69.9%	No	19.9%	No Resp.	10.3%
General evaluation of activity	Yes	81.6%	No	9.6%	No Resp.	8.8%
Suggestions for the future	Yes	79.4%	No	11.8%	No Resp.	8.8%

5. Our agency screens staff members for their abilities and/or competencies.
6. Our agency provides training for staff members.



Checklist for question 5 – This screening process includes:

Interviews	Yes	83.8%	No	8.1%	No Resp.	8.1%
Reference checks	Yes	64%	No	23.5%	No Resp.	12.5%
Certifications	Yes	78.7%	No	13.2%	No Resp.	8.1%
Observation of skills	Yes	80.1%	No	12.5%	No Resp.	7.4%
Written test of knowledge	Yes	21.3%	No	62.5%	No Resp.	16.2%

Checklist for question 6 – Staff training includes:

CPR	Yes	68.4%	No	22.8%	No Resp.	8.8%
First aid	Yes	69.9%	No	21.3%	No Resp.	8.8%
Basic activity skills	Yes	78.7%	No	14.7%	No Resp.	6.6%
Advanced activity skills	Yes	55.9%	No	33.8%	No Resp.	10.3%
Equipment usage	Yes	79.4%	No	13.2%	No Resp.	7.4%
Equipment repair	Yes	57.4%	No	33.8%	No Resp.	8.8%
Group facilitation	Yes	72.1%	No	20.6%	No Resp.	7.4%
Search and rescue	Yes	28.7%	No	60.3%	No Resp.	11.0%

When an analysis of the data was done to test for the effects of demographics on this category, the following was found.

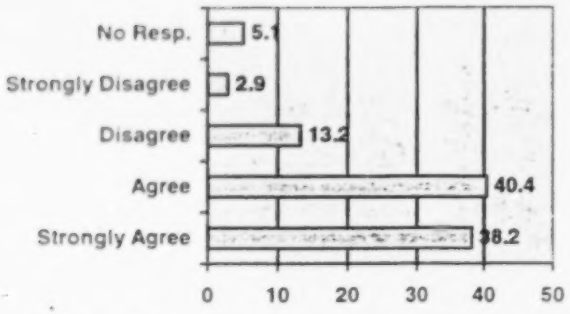
Institutional funding	None
Agency housing	None
Enrollment	None
Full time employees	None
Part time employees	None
Type of institution	Some, the level of significance was .198
Contact days	Yes, at .006 level of significance*
Geographic region	None

*A question has been raised with the type of test that was used in this instance. There may or may not be an actual effect here.

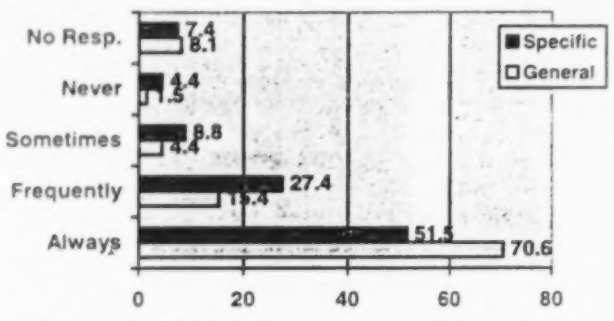
PARTICIPANT EDUCATION

The questions for this category were grouped together because they refer to agency's attempt to educate the participants about the risks associated with adventure activities. Again, some questions are combined with others on the same graph to emphasize a comparison.

1. Our agency has risk management policies that define the responsibilities of the agency's participants.



2. Our agency informs participants of the *general* risks associated with the adventure recreation prior to participation; e.g. possible injury, dismemberment, disability, or death.
3. Our agency informs participants of the *actual* risks associated with the specific adventure activity or event prior to participation; e.g. snake bites, falling rocks, and skin irritations from poisonous plants.



Checklist for question 2 – This information is provided through:

Pre-trip group meeting	Yes	83.1%	No	12.5%	No Resp.	4.4%
Pre-trip individual meeting	Yes	31.6%	No	52.2%	No Resp.	16.2%
Photographs or slides	Yes	25%	No	58.8%	No Resp.	16.2%
Printed documents	Yes	88.2%	No	8.8%	No Resp.	2.9%
Video	Yes	15.4%	No	65.4%	No Resp.	19.1%
Verbal explanation	Yes	84.6%	No	9.6%	No Resp.	5.9%

When an analysis of the data was done to test for the effects of demographics on this category, the following was found.

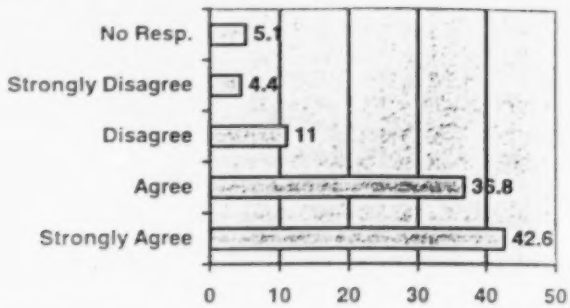
Institutional funding	None
Agency housing	None
Enrollment	None
Full time employees	None
Part time employees	None
Type of institution	Yes, the level of significance was .044
Contact days	Yes, at .013 level of significance*
Geographic region	None

*A question has been raised with the type of test that was used in this instance. There may or may not be an actual effect here.

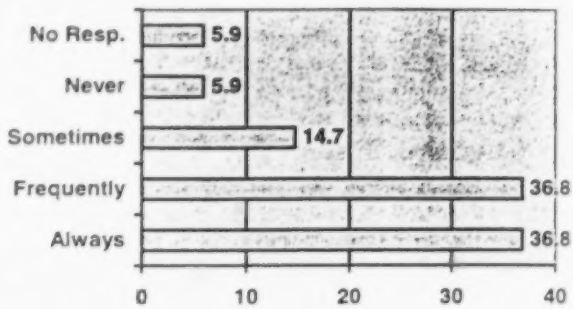
WRITTEN DOCUMENTATION

The questions for this category were grouped together because they refer to the agency's attempt to minimize risks by maintaining written records of agency operation. Again, some questions are combined with others on the same graph to emphasize a comparison.

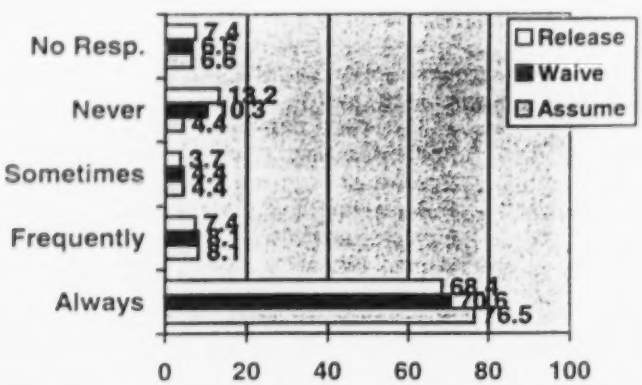
1. Our agency has risk management *policies* that exist in written form.



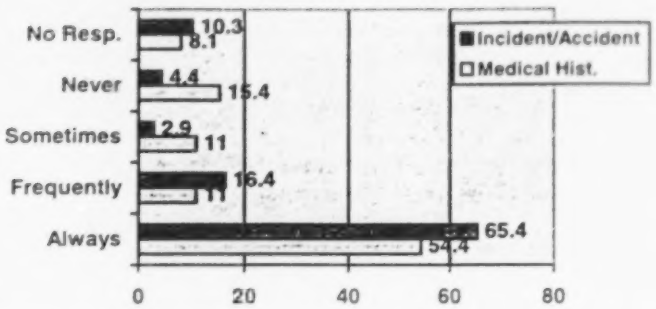
2. Our risk management *procedures* exist in written form.



3. Our agency uses documentation requiring the participant's signature to record his/her *acknowledgment of inherent risks* associated with participation (he/she understands the risks associated with the activity and agrees to accept them).
4. Our agency uses documentation requiring participant's signature to record his/her agreement to *waive the right to sue our agency* should he/she be injured during participation in an agency activity or event.
5. Our agency uses documentation requiring participant's signature to record his/her agreement to *release agency and staff from responsibility of wrong doing* should he/she be injured during an agency activity or event.



6. Our agency obtains a medical history form from participants for an activity that is off site or above the participant's average daily level of exertion.
7. Our agency uses incident/accident forms.



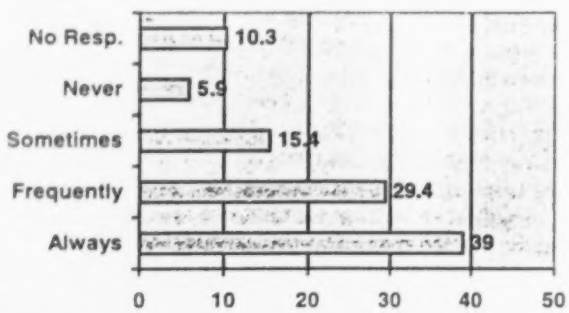
Checklist for question 6 – The medical history document includes:

Insurance carrier's name	Yes	57.4%	No	24.3%	No Resp.	18.4%
Emergency contacts	Yes	73.5%	No	9.6%	No Resp.	16.9%
Physical examinations	Yes	14%	No	64%	No Resp.	22.1%
Past medical history	Yes	60.3%	No	19.1%	No Resp.	20.6%
Current medications	Yes	71.3%	No	11%	No Resp.	17.6%
Emergency medical treatment authorization	Yes	48.5%	No	30.1%	No Resp.	21.3%

Checklist for question 7 – A debrief includes: **Unavailable**

Discussion of incident reports	Yes	-%	No	-%	No Resp.	-%
Evaluation of activity site	Yes	-%	No	-%	No Resp.	-%
Evaluation of equipment	Yes	-%	No	-%	No Resp.	-%
Self-evaluation and peer-evaluation	Yes	-%	No	-%	No Resp.	-%
General evaluation of activity or event	Yes	-%	No	-%	No Resp.	-%
Suggestion for future	Yes	-%	No	-%	No Resp.	-%

8. Our agency's equipment usage is documented.



Checklist for question 8 – The information that is documented includes:

Each use	Yes	58.8%	No	27.9%	No Resp.	13.2%
Repairs	Yes	60.3%	No	22.8%	No Resp.	16.9%
Damages	Yes	66.9%	No	17.6%	No Resp.	15.4%
Repairs	Yes	69.1%	No	17.6%	No Resp.	13.2%

Checklist for question 8 – Equipment that receives usage documentation:

General camping	Yes	52.2%	No	27.9%	No Resp.	19.9%
Climbing/mountaineering	Yes	59.6%	No	14%	No Resp.	26.5%
First aid kits	Yes	59.6%	No	19.9%	No Resp.	20.6%
Watercraft	Yes	39.7%	No	27.2%	No Resp.	33.1%

Skiing	Yes	27.2%	No	33.8%	No Resp. 39%

When an analysis of the data was done to test for the effects of demographics on this category, the following was found.

Institutional funding	Some, at .203 level of significance
Agency housing	None
Enrollment	None
Full time employees	None
Part time employees	None
Type of institution	None
Contact days	Yes, at .000 level of significance*
Geographic region	None

*A question has been raised with the type of test that was used in this instance. There may or may not be an actual effect here.

CONCLUSSION AND RECOMMENDATIONS

When one looks at the data that has been presented, the message is clear that the agencies that responded positively, either with a one or two, to the Likert Scale questions far out number those that responded negatively. Further still, the responses to the checklists were also positive. Since this instrument was designed using the literature and suggestions written by experts in the field of adventure risk management, this leads to the conclusion that agencies are in agreement with the experts' recommendations.

In reviewing the data concerning the demographic effects on the categories, some commonly held beliefs have been shown to have no credence. Agency housing, institutional enrollment, number of full time employees, number of part time employees, and geographic region were shown to have no effects on any of the categories. Thus, the use of techniques did not differ in these categories for private or public schools, agencies run by part time graduate students or seasoned professionals, those housed in student unions or recreation centers, or east coast agencies or west coast agencies.

The number of agency contact days appears to have an effect on each of the categories, but as mentioned before, a question has been raised with the type of test that was used in this comparison. Therefore, there may or may not be an actual effect with this data. The type of institution had some effect on development of agency staff and a definite effect on participant education. Finally, institutional funding had some effect on the use of written documentation.

In the Results section, the data was presented in such a way as to make some comparisons between questions evident. If the reader did not notice these comparisons, please review the past section and look for information such as:

- agencies that frequently or always use incident/accident reports outnumber those that use medical history forms by 16.9 percentage points
- agencies that always or frequently have systematic ways of including risk management into conducting an activity outnumber those that responded similarly to including risk management into evaluating an activity by 10.3 percentage points.

There are also many observations that can be made by comparing questions that have been put into different categories. When a positive response was referred to it meant an answer of one or two on the Likert Scale.

1. The existence of risk management policies *versus* having the policies reviewed and/or approved by the institution
   - 84.5% responded positively to the existence of risk management policies that guide agency operation
   - 66.9% responded positively to having the policies reviewed by the institution that would have to defend the agency in court and 66.1% responded positively to the institution approving the policies.
2. The existence of risk management policies *versus* the existence of policies in writing *versus* the systematic distribution of policies to staff.
   - 84.5% responded positively to the existence of risk management policies that guide agency operation

- 79.5% responded positively to the existence of policies in writing
- 66.9% responded positively to the existence of systematic ways of distributing the policies to staff

3. Risk management procedures exist in written form *versus* the systematic distribution of procedures to staff.
    - 73.6% responded positively to the existence of risk management procedures in written form.
    - 64.7% responded positively to a systematic way of distributing the procedures to staff.
4. Use of acknowledgement of risk *versus* a waiver *versus* a release *versus* an incident/accident form *versus* a health form
    - 84.6% responded positively to using an assumption of risk form
    - 78.7% responded positively to using a waiver
    - 75.8% responded positively to using a release
    - 82.3% responded positively to using an incident/accident form
    - 64.4% responded positively to using a medical history form

Hopefully, the author is not the only one that notices discrepancies in this data. Although the responses to the stated questions are still far more positive than negative, there appear to be holes that need attention. Such as, why do over 84% of the agencies say they have risk management policies but only a little over 66% say they have been approved by the institution that will have to defend the agency in court? Why do 84.5% of the agencies say they have risk management policies but only 66.9% say they have ways to get the information to the staff 'people that need it? Why is the medical history form the least used document when experts say it should be the first one used? If one were to pour over this data further, a dozen such questions could be asked. Any of which could be develop into a new research project. It is necessary to lace these individual pieces together into an integrated mode of operation rather than sheets of paper in a notebook sitting on the shelf.

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